The Zen of AMR

(with apologies to "The Zen of Python")

```
(l / love-01
    :ARG0 (p / person
            :name (n / name :op1 "Theodore"))
    :ARG1 (s / system
            :ARG0-of (o / operate-01
                    :ARG1 (c / computer
                            :poss p))))
```

One graph to rule them all.

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(l / love-01
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One graph to rule them all.

Defragmented semantics in (basically) a rooted DAG.

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One graph to rule them all.
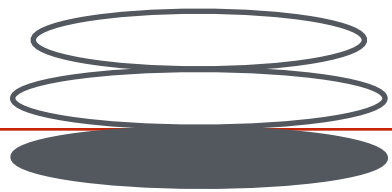
Defragmented semantics in (basically) a rooted DAG.

AMR is not in the derivation business.

```
(l / love-01
    :ARG0 (p / person
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    :ARG1 (s / system
             :ARG0-of (o / operate-01
                         :ARG1 (c / computer
                                  :poss p))))
```

Entity and event variables give coreference for free.

```
(l / love-01
    :ARG0 (p / person
              :name (n / name :op1 "Theodore"))
    :ARG1 (s / system
              :ARG0-of (o / operate-01
                          :ARG1 (c / computer
                                    :part-of p)))))
```

Deep is better than shallow.
(Paraphrases should have the same AMR.)
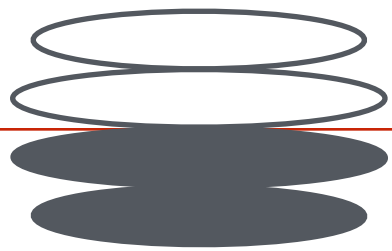
…but practicality (for annotation) beats purity.

Theodore is in love with his computer's operating system.
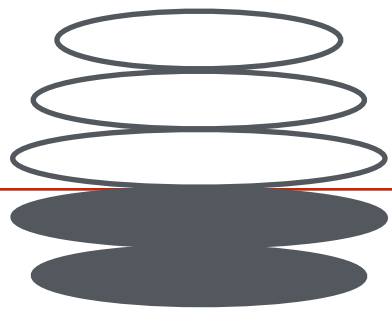Theodore loves his computer's operating system.
The operating system of Theodore's computer is loved by him.

Theodore adores the operating system in his computer.
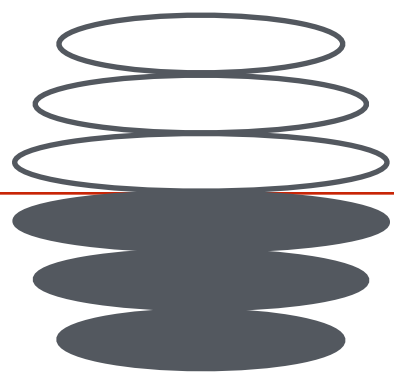Theodore is romantically involved with his operating system.

It doesn't have to be an interlingua,
so long as it is more logical than English.

There should be one and preferably only one obvious way to AMR it.

AMR is a canonical form.

The annotator experience matters.

Sentence: According to Ginsburg, we have an obligation to provide others with contraception

```
(s / say-01
    :ARG0 (p / person :wiki "Ruth_Bader_Ginsburg" :name (n / name :op1 "Ginsburg"))
    :ARG1 (o / obligate-01
        :ARG1 (w / we)
        :ARG2 (p2 / provide-01
            :ARG0 w
            :ARG1 (c / contraception)
            :ARG2 (p3 / person)
```

provide-01
    ARG0: provider
    ARG1: thing provided
    ARG2: entity provided for (benefactive)

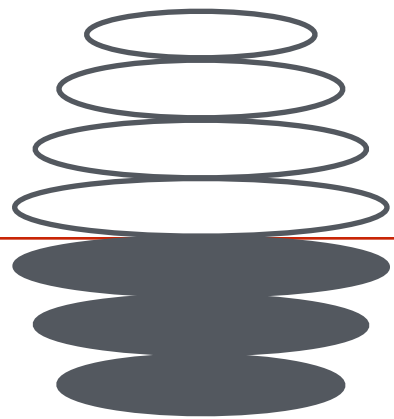Enter text command: p3 :mod other

how

- **:ARGx**
  - **How much** does this cost?   `(cost-01 :ARG2 amr-unknown)`   Example
  - **How** did you solve the problem?   `(solve-01 :ARG2 amr-unknown)`   Example
- **:degree**
  - **How** big was the dog that bit you?   `(big :degree amr-unknown :domain :dog)`   Example
  - **How beautiful** you are. [= You are so beautiful.]   `(beautiful :degree so :domain you)`   Example
- **:manner**
  - **How** did you get him to help you?   `(get-04 :manner amr-unknown)`   Example
  - The only thing that surprises me is **how rapidly** this is happening.   `(surprise-01 :ARG0 (rapid :manner-of this))`   Example
- **:quant**
  - **How tall** are you?   `(tall :quant amr-unknown :domain you)`   Example
  - **How old** is your father?   `(father :age amr-unknown :poss you)`   Example

however

- contrast-01 (most cases)
  - John, however, stayed at home.   `(contrast-01 :ARG2 stay-01)`   Example
- **:concession**
  - It started to rain; however, the game continued.   `(start-01 :ARG1 rain-01 :concession-of continue-01)`   Example
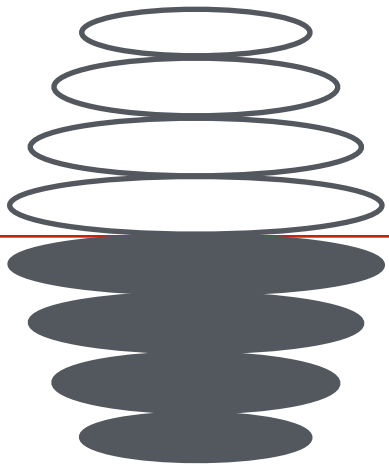
imperative ⧉

- :mode imperative
  - Go home!   `(go-02 :mode imperative :ARG0 you :destination home)`   Example
  - Let's go home.   `(go-02 :mode imperative :ARG0 we :destination home)`   Example
  - Come on folks!!   `(come-25 :mode imperative :ARG1 folk)`   Example
- :mode imperative :polite +
  - **Please** close the door.   `(close-01 :mode imperative :polite +)`   Example
  - **Could** you close the door?   `(close-01 :mode imperative :polite +)`   Example

Morphosyntactic sugar
is considered unhealthy.

```
(d / decide-01
    :ARG0 (h / he)
    :mod (p / politics)
    :manner (t / think-01 :polarity -
                :ARG0 h))
```

He made a thoughtless political decision.

Verbs (events)
are better than nouns (plain concepts).

Adjectives are better than adverbs.

Adjective frames are better than `:mod`.
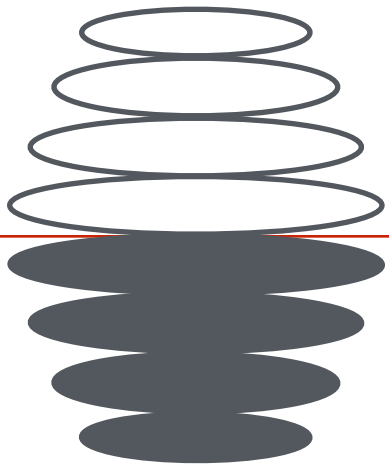
Core roles are better than non-core roles.

Anything is better than `:prep-X`!

```
(p / president)
```

the president

```
(p / person :ARG0-of (p2 / preside-01))
```

the person who presides

Verbs (events)
are better than nouns (plain concepts).

(Except when the meaning is noncompositional.)
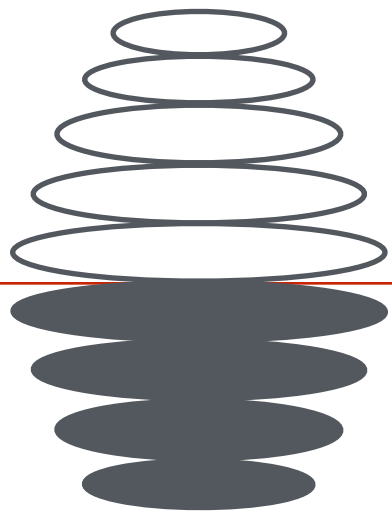
Adjectives are better than adverbs.

Adjective frames are better than `:mod`.

Core roles are better than non-core roles.

Anything is better than `:prep-X`!

```
(p / person
    :ARG0-of (h / have-org-role-91
                :ARG1 (…Russia…)
                :ARG2 (p2 / president)))
```

the Russian president

Occasionally you need to hallucinate to fill in the gaps.

```
(m / meal
    :ARG1-of (c / cost-01
                :ARG2 (m2 / monetary-quantity
                        :quant 3
                        :unit (d / dollar))))
```

a $3 meal
a meal that costs $3

```
(g / government-organization
    :ARG0-of (g2 / govern-01
                 :ARG1 (…China…)))
```
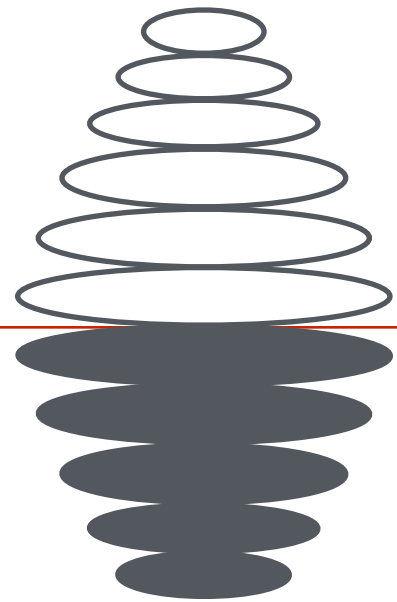
the Chinese government
the government of China

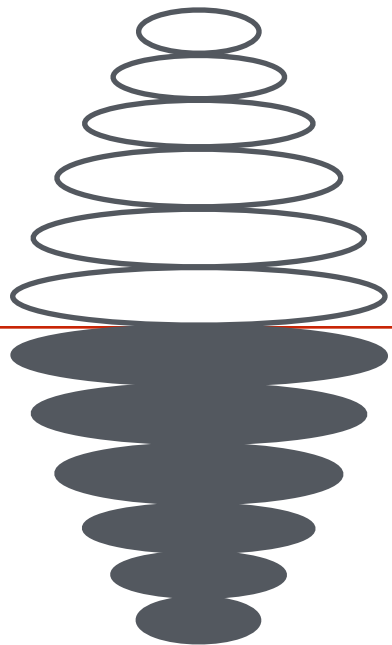A government is a **government-organization** that governs.

```
(g / government-organization
    :ARG0-of (g2 / govern-01)
    :mod (f / federal))
```

the federal government

The sentence is a starting point.
It should not be a straightjacket.

In the future, AMR will pay better attention to cross-sentence/discourse phenomena.

AMR does not compromise for algorithmic expedience. (Algorithms will have to catch up!)

http://amr.isi.edu